

SPINE BIOMECHANICS & NEUROMUSCULAR CONTROL LABORATORY

CENTRE FOR BONE AND MUSCLE HEALTH

Have you ever wondered how your spine works? The Spine Biomechanics and Neuromuscular Control Laboratory, run by Assistant Professor Dr. Shawn Beaudette, looks at the mechanical and physiological aspects that relate to how our spines move, including how this relates to spine function, injury, and rehabilitation.



NEURAL CONTROL

Our brains and bodies work together to provide each other with valuable sensory information in order to adapt to the environments that we encounter on a daily basis. What happens when there are problems within this system? How can we (re)train this system?

THE SPINE

Lower back pain and injuries are common today, and we work to understand these issues by focusing on spine health in young adults, athletes, and patients. Every individual is unique and therefore requires a personalized approach to care.

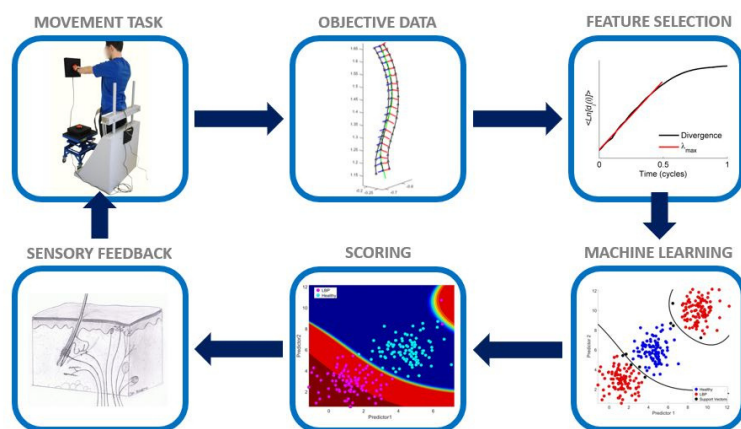


OBJECTIVE DATA

We aim to identify where the problem may be occurring by collecting data from a variety sources. These include the non-invasive assessment of spine movement and muscle activation. We use these data to facilitate the measurement of spine function, and data-driven scoring of movement types.

PUTTING IT ALL TOGETHER

Our research doesn't happen in a vacuum. By blending biomechanics, ergonomics, and motor control to understand how spine movement is impacted in a variety of populations, we aim to reduce both the incidence of injury and to promote recovery.



- Want to learn more about this lab? Check out Dr. Beaudette's faculty profile: <https://brocku.ca/appliedhealthsciences/kinesiology/shawn-beaudette/>